

## AMENDMENTS TO THE CLAIMS

Cancel Claims 5, 7, 9, and 10 without prejudice. Please accept amended Claims 1-4, 6, 8 and new Claims 11 and 12 as follows:

Listing of claims:

1. (Currently Amended) A computer readable medium embodying instructions executable by a processor to perform method of generating a feasible schedule for n jobs given a duration and a revisit time for each job, comprising:

receiving an input data describing the n jobs, the duration, and the revisit time for each of the n jobs;

determining from the input data whether it is impossible to generate a feasible schedule;

determining from the input data whether a round robin schedule is possible and upon determining that the round robin schedule is not possible performing steps for determining a feasible schedule, wherein determining the feasible schedule comprises, :

calculating a theoretical ~~probabilities~~ probability for each of the n jobs, wherein the theoretical probability is a probability that a job will be performed next;

calculating an actual ~~probabilities~~ probability for each of the n jobs, wherein the actual probability is a relative amount of time that each job is to be performed;

creating a potential schedule for the n jobs based on the theoretical probabilities and the actual probabilities; ~~and~~

searching for a the feasible schedule of the n jobs from the potential schedule of the n jobs; and

outputting the feasible schedule wherein the n jobs are scheduled according to the feasible schedule.

2. (Currently Amended) The ~~method~~ computer readable medium of claim 1, wherein determining whether it is impossible to generate a feasible schedule comprises determining whether

$$\sum_{i=1}^n \frac{\tau_i}{\tau_i + \mu_i} > 1$$

is satisfied, wherein

$n$  is a number of jobs,

$\tau_i$  is a duration time, and

$\mu_i$  is a revisit time.

3. (Currently Amended) The ~~method~~ computer readable medium of claim 1, wherein determining wherein determining whether a round robin schedule is possible comprises determining whether

$$\sum_{i=1}^n \tau_i \leq u_i$$

is satisfied, wherein

$n$  is a number of jobs,

$\tau_i$  is a duration time, and

$u_i$  is a value of a residual vector.

4. (Currently Amended) The ~~method~~ computer readable medium of claim 1, wherein calculating theoretical probabilities comprises selecting a theoretical probability

$$z_i \geq \frac{\tau_i}{\tau_i + k \cdot u_i}, i = 1, \dots, n$$

, such that  $\sum_{i=1}^n \frac{\tau_i}{\tau_i + \mu_i} = 1$ , wherein

$\tau_i$  is a duration time,

$\mu_i$  is a value of a residual vector,

$n$  is a number of jobs, and

$\mu_i$  is a revisit time.

5. (Canceled)

6. (Currently Amended) The ~~method~~ computer readable medium of claim 4, wherein calculating

theoretical probabilities further comprises calculating a  $q_i = \frac{2}{\sum_{j=1}^n \tau_j}, i = 1, \dots, n$  an array

including the theoretical probability for the  $n$  jobs.

7. (Canceled)

8. (Currently Amended) The ~~method~~ computer readable medium of claim 1, wherein creating a potential schedule based on the theoretical probabilities and the actual probabilities comprises

storing results from  $j = \arg \max_{j \in \{1, \dots, n\}} d_j$ , wherein  $d_i$  is the determining a difference between the theoretical probabilities and the actual probabilities for each of the  $n$  jobs.

9-10. (Canceled)

11. (New) The computer system of claim 1, wherein the method further includes outputting the round robin schedule for the  $n$  jobs upon determining that the round robin schedule is possible.

12. (New) The computer system of claim 8, wherein searching for the feasible schedule of the  $n$  jobs from the potential schedule of the  $n$  jobs further includes determining a job number for each of the  $n$  jobs that is farthest from a corresponding theoretical probability.